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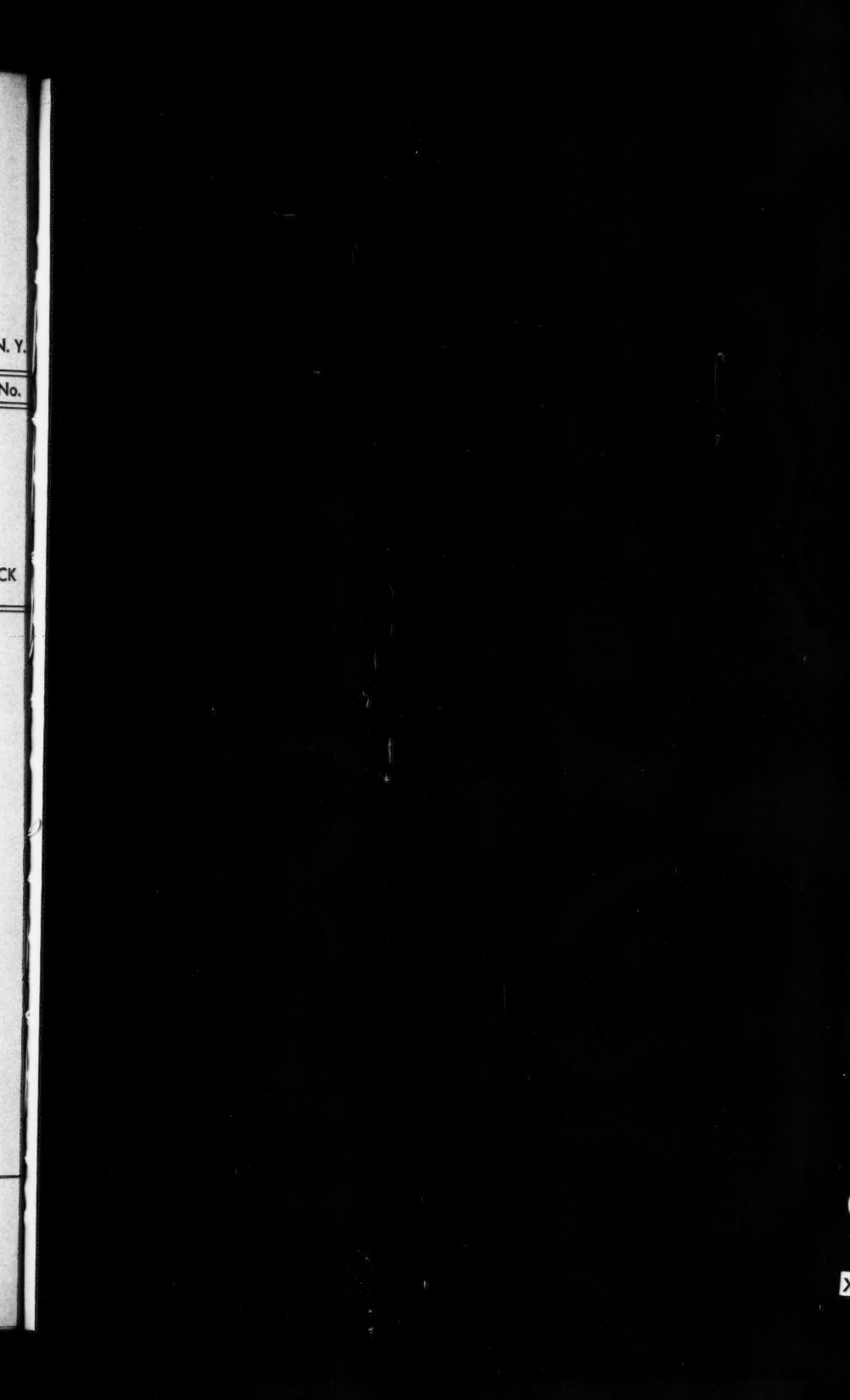

179. MOTOR TRAFFIC AND TOMORROW'S CITIES. (Better Roads, August, 1939).

What are we going to do about traffic on the streets of our large cities? City officials and traffic engineers have been butting their heads against that question for years.

Contemplation of the construction of wide and expensive urban arterials on a vast scale suggests a number of problems having to do with the transportation habits of city people and with the prospective evolution of our huge sprawling metropolitan concentrations of people and homes, industry and trade. What can we do about an aggravated parking problem? What can we predict about future urban population and traffic movements? Would the construction of new express traffic routes only intensify other problems of which the cities are becoming acutely aware? Will freer traffic flow actually aid in the rehabilitation of "blighted" areas in the cities? Can we hope to solve problems of city congestion effectively without encouraging the fullest development of mass-transportation facilities?

BETTER ROADS has put these questions to a number of well-known authorities on city planning and development, including Lewis Mumford, author of "The Culture of Cities;" George H. Herrold, planning engineer of the city planning board of St. Paul, Minn.; Robert Kingery, manager of the Chicago Regional Planning Association; Professor William Bailey, Northwestern University sociologist; Clifford Shaw, director of the Chicago Area Project, and Walter H. Blucher, director and Paul Oppermann, assistant director of the American Society of Planning Officials. A summary of their opinions is given, along with comments from papers by Miller McClintock, director of the Yale Bureau for Street Traffic Research, and Charles Gordon, managing director of the American Transit Association.

180. ROAD IS KEY TO NEW CARS. W. S. Canning. (New York Times, June 11, 1939).

At the World Automotive Engineering Congress of the Society of Automotive Engineers greater speed and comfort were predicted by A. L. Clayton, experimental engineer of the Sun Oil Co. and W. S. Canning of Keystone Automobile Club. They said, "One hundred and fifty miles on a properly constructed highway can easily be safer than is fifty miles an hour on many roads where that speed is legal today." Superhighways connecting

great centers of population, manufacture, and ports, as from Portsmouth, N. H. and Boston, to New York, Philadelphia, Baltimore, Washington and Richmond, and suitable for 150 m.p.h. may be closer to realization than most of us now imagine. Where such highways pass through cities, they may use space of low property value, as back alleys. Under such elevated structures may be parking or warehouse facilities. Access to the high speed lanes may be had at intervals of one-third mile by means of accelerating and decelerating lanes.Although the artery may consist of eight or more lanes, the pavement width will be separated by divisional islands at least every two lanes.

In the suburbs the highway becomes reduced to perhaps three lanes but will have one for accelerating or decelerating; and access may be reduced to one every mile or two.In rural areas the highway will skirt villages and afford them no direct entrance except at intervals of five, ten,or fifteen miles.Thus the number of lanes may be reduced to two, and the pavement may be laid mostly on the ground. In mountains, grades may be steeper, but not suddenly. By easy horizontal and vertical curves sight distances will be kept suitable for speeds of 220 feet per second. On some curves the pavements may be separated to permit different superelevations for truck and passenger car speeds. Because the route is screened monotonously by evergreens,such warning signs as are needed will be heeded. The radio will issue warnings too, where needed. When we approach Cleveland after a four hour drive from New York City, the radio voice prepares us for the stop we shall make for lunch. Then in another three hours we shall run to Chicago; almost as fast as air travel and with comfort. The Pennsylvania Tunnel Highway is a straw in the wind. If it develops the traffic anticipated, other super-highways will be built.

181. WARNING FOR WILD DRIVERS. (Engineering News-Record July 6, 1939).

Experiments have been made in Seattle with a safety idea which puts obstructions on the pavement in center strips that separate opposed traffic. The purpose was to give a danger warning to careless or drunken drivers. The plan has greatly decreased the accidents at safety islands by giving very positive warning to occupants of any car that gets out of the prescribed traffic lanes and heads toward one of the islands.

The first design consisted of pipes set transversely 25 ft. apart for 1,000 ft. each way from the safety island.The pipes were 5 ft. long., $1\frac{1}{2}$ in. in diameter and were flattened at both ends and at the center, with anchor bolts into the pavement at these three points. Concrete mounds also were tried, set alternately with the pipes using a base width of 4 in.

and a height of 1½ in. above pavement surface. The concrete mounds were more satisfactory because they did not rust, required no repainting, and were not knocked out of place as easily as the pipes.

The experiments led to a decision to use precast concrete mounds near safety stations on major thoroughfares. An improved design for the mounds was adopted in which the height is 3 in. and the base width 12 in. This increased height and the greater base width, gives more pronounced indication in a car traveling at high speed, and is expected to make for a durable installation. Instead of the full 5 ft. length used at first, the later design calls for mounds cast in two halves each 2½ ft. long. Preparation of the pavement for these mounds consists of drilling holes into which dowels can be grouted leaving the upper end projecting. Precast mounds, with holes to take these dowls, are then placed and bedded in grout.

182. TEXAS LANDSCAPES FOR SAFETY. Jac. L. Gubbels. (Better Roads, June, 1939).

The Texas State Highway Department is attempting to make driving safer and more comfortable through scientific landscaping of its highways.

The author graphically portrays what they are doing by describing the reaction of a driver to roadside developments.- When operating on a road having poor alignment and with deep ditches on each side, the driver keeps his speed at about 45 m.p.h. and he shows much evidence of strain and anxiety. As soon as a stretch of modern highway having wide right of way, low cross-section, scientific alignment, and broad cradle rooker dips on either side was reached, speed was increased and the tenseness practically eliminated.

Among the things being done in Texas, are the placing of shrubbery as backgrounds for signs and as outlines for the outsides of curves, and the planting of trees to outline curves as well as to form imaginary bottlenecks which cause reduction in speed at locations such as hillcrests. This is done by allowing the trees to arch over the roadway so as to give the impression to an oncoming motorist that the road narrows.

The author also explains road focus and its relation to speed.

183. WHAT YOU DON'T KNOW CAN HURT YOU. Arthur F. Loewe (New Jersey Municipalities, June, 1939).

"What you don't know can hurt you" is well illustrated by

the growing knowledge having to do with the pedestrian accident problem. In the past the greatest effort has been made in order to control the movement of vehicular traffic, in order to prevent accidents. Recent investigations have indicated very definitely that a decided change is needed in the point of application of maximum effort. That point of maximum effort is now the pedestrian problem.

We must appreciate the value of adequate investigation of our accident problem from every view point. It is true that some of our larger cities are organized to take care of the problem adequately if sufficient finances were made available to allow the organization to work successfully. It is true that many of our smaller communities may see the need of organization, but cannot see their way clear to solving their problem. This situation as it exists throughout the entire State indicates the great need of close cooperation and immediate acceptance of all forms of assistance, whether financial, engineering, or or manpower that our various State governmental departments have determined were necessary, and have offered to Municipalities and Counties.

184. MICHIGAN TO INSTALL NEW UNIFORM SIGN PLAN. (Better Roads, August, 1939).

A new code of uniform sign markings will be put into effect in Michigan during the next few years, according to Murray D. Van Wagoner, state highway commissioner. The new code has five important features:

1. Stop signs twice as large as those now in general use.

2. Turn markers indicating four stages of abruptness in curves, the direction of the curve and optimum "safe" speed.

3. Larger route markers, placed higher above the pavement in cities, so that parked automobiles will not hide them.

4. Mileage and direction posts facing approaching traffic, so that motorists can obtain information without stopping or slowing up at intersections.

5. Fewer pavement markings, placed only where limited visibility makes average speeds unsafe.

185. PAVEMENT MARKINGS HAVE A MEANING. H. O. Schermerhorn. (Public Safety, August, 1939).

The vast majority of motorists not only are willing but anxious to drive safely, provided they are given reliable and intelligent information which will enable them to do so.

One important method of conveying this information to the driver is by means of pavement markings. Experience has shown that where pavements are divided into lanes by lines painted, upon the pavement and by other special markings, traffic friction is lessened, the number of accidents reduced and the movement of traffic expedited.

The division of highways of the Department of Public Works of the State of New York has given special study to this subject during the past year. The matter has been made difficult by the fact that there is at present no uniformity among the different states as to pavement markings.

The new system is based on the use of three different kinds of lines:

The first is the single broken line, which looks like this _ _ _ _ _. It is used to show motorists the lanes in which they should travel. A motorist will not be in danger necessarily if he crosses the single broken line, but his chances of accident will be less, and traffic will more faster and more smoothly if cars stay in the lanes marked by the single broken lines.

The second is the single solid line, which looks like this _____. This line should not be crossed except under unusual circumstances and only when no approaching car is in sight. Any motorist who crosses it is taking a chance of serious accident unless he uses great caution and is sure that it is safe to do so.

Its principal use is to separate traffic moving in opposite directions, and obedience to it will prevent head-on collisions. When used so it is a substitute for the mall or grass plot which is built in the center of modern divided highways. It is also used at intersections, where it is essential that traffic stay on its own side of the road if confusion and accidents are to be avoided.

The third is the double line which looks like this ═══ Or this = = = = =.

Conditions are frequently encountered along the highways where a driver traveling in one direction can see sufficiently far ahead to enable him to use his judgment as to whether it is safe for him to even start to pass. To avoid unnecessary

delay to the motorist who can see approaching cars at a reasonable distance, and at the same time to warn the other driver who cannot, it is necessary to use a marking with different meanings, according to the side from which it is seen.The double line,which consists of a solid line and a broken line, painted side by side, accomplished this purpose. If the solid line is on the driver's side, the double line constitutes an absolute prohibition against crossing. A motorist who crosses it not only invites a serious accident, but is violating the law and is liable to fine or imprisonment, or both. If the broken line is on the driver's side, the double line becomes a warning only. The driver is in a position to use his own judgment and may cross the line to pass, if safe to do so.

In some locations sight distance is short in both directions. In such cases the double line is solid on both sides, and cars proceeding in both directions are prohibited from passing.

186. LOWER THOSE HEADLIGHTS! (Safety, August, 1939).

New York Motorists: Dim your headlights!

There is a new state law in force now, an amendment to the New York State Vehicle and Traffic Law which contains two important provisions designed to eliminate amny of the night accidents caused by glare or by insufficient illumination. They apply to the use of upper and lower beams of headlights, equipped to project two or more beams.

The driver must switch to the lower beam when a vehicle approaching from ahead is within 500 feet. The driver is also prohibited from using the upper beam in lighted areas where there is sufficient illumination to make visible substantial objects, or persons, 200 feet ahead.

The law provides that "multiple beam headlamps shall be sufficient to reveal any person,vehicle or substantial object on the highway straight ahead of such vehicle for a distance of at least 350 feet and single beam headlamps shall be sufficient to reveal any person, vehicle or substantial object on the highway straight ahead of such vehicle for a distance of at least 200 feet."

The old law requires headlights capable of illuminating objects only 200 feet ahead in any circumstances.

187. YOU CAN'T HIT IT IF IT ISN'T THERE. Oscar M. Gundrson, Traffic Engineer, Michigan State Police. (Public Safety, August, 1939).

The ultimate solution of fatal fixed object crashes isn't to be found until you analyze the reports very carefully. What is there about fixed object accidents that is different from most other types? Since driver factors and vehicle factors may appear in any type of accident, obviously the basic difference is to be found in a highway factor. What is there about the highway which contributes to fixed object accidents? Simply this: the presence of fixed objects.

Shall we then remove all fixed objects from the right of way? To attempt to follow out a program of denuding the right of way of all fixed objects would be so costly that any reasonable budget would be exhausted before the work was well started, and the ire of the esthetes would be something that no administration could withstand. What then can be done?

Adequately marking the offending objects is of considerable benefit in reducing those accidents which result from lack of notice. For example, reflectors, white posts, white slats and diagonal striping are means which are commonly used to mark an obstruction.

To actually eliminate fixed object accidents, the objects themselves must be eliminated. It is impossible to eliminate all of these, so the best that can be done is to remove those which have been or are very likely to be struck by a vehicle for the moment out of control.

188. RED SIGNAL ADAPTED AS A SAFETY LIGHT. Charles Adler Jr. (New York Times, July 23, 1939).

Intersections on State highways, where traffic moves normally at high speed, are frequently located in the center of or adjacent to small towns. The signals display the green light to one road indefinitely, while showing the red indication to the crossroad until a vehicle approaches on the crossroad.

The green light is in many cases, visible for considerable distances to approaching motorists,end many drivers upon viewing the green light fail to reduce the speed of their cars and in some cases increase speed in order to reach and pass the signal before it changes to red.

A new traffic signal that combines the dual function of automatically directing the right-of-way of vehicles at an intersection and of controlling their speed is attracting much attention at the crossing of Harford and Joppa Roads in the town of Carney, Maryland, nine miles from Baltimore.

In the absence of all traffic, the four faces of the signal normally show the red light to each approach to the crossing.

Imbedded in the right-hand lane of each road, 150 feet from the crossing, are elements that detect the sound of approaching cars and convert the sound into electrical impulses. These impulses are conveyed by underground wires to the signal-controlling mechanism which is located in a cabinet at the side of the intersection.

When a car approaching the intersection passes the sound detector, the signal mechanism is actuated, and, after a delay of several seconds, this mechanism changes the signal from red to green. The duration of this delay is equal to the number of seconds required by a vehicle to traverse the distance between the detector and the signal if the car is traveling at the rate of speed specified for safety.

If the driver is alert and voluntarily reduces speed, the signal will change from red to green before he reaches it and thus permit him to negotiate the crossing without stopping, assuming, of course, that there is no traffic on this intersecting road.

NEWS ABOUT THE TRAFFIC ENGINEERING PROFESSION

T. ELMER TRANSEAU. Mr. T. Elmer Transeau has resigned his position as Assistant Director of Public Safety, City of Philadelphia, to become Director of the Bureau of Highway Safety, Department of Revenue.

CHANGE OF ADDRESS. Have you changed your address recently? Do you still want to receive your mail at the address you gave us six months or a year ago? Do you have the same title?

It is important that we have any changes in either your position, title, or address so that it can be included in the new Membership Roster being planned for this fall.

ITE MEMBERS ON JOINT COMMITTEE. The following Institute members served on the Joint Committee on Signs, Signals, and Markings:

John S. Beakey	William B. Powell
W. Graham Cole	Walter F. Rosenwald
Harold F. Hammond	Clarence P. Taylor
E. W. James	Arnold H. Vey
Burton W. Marsh	Sidney J. Williams

P.S. This is a corrected rerun of the item appearing in the July issue of TRAFFIC ENGINEERING.

SOUND SLIDE FILM ON DRINKING DRIVERS. "Testing the Drinking Driver" is the title of a new twenty-minute sound slide film which is now ready for distribution by the National Safety Council. The film can be borrowed free from the National Safety Council except for transportation and insurance costs.

The film presents in an interesting and instructive manner the proper procedure to follow in securing convictions of drivers who are under the influence of alcoholic liquor. Its purpose is to encourage the use of scientific tests for driver intoxication, including approved methods of police examination and chemical tests of body fluids or breath. For further details write to the National Safety Council, 20 North Wacker Drive, Chicago, Illinois.

500 TRAFFIC ENGINEERS. About 500 men are now employed as traffic engineers. All but 50 of these are in the service of the Federal government, State governments or the 35 cities having formalized traffic control units as part of their municipal administration. (Roads and Streets, July, 1939).

D. GRANT MICKLE TO HEAD TRAFFIC AND SAFETY DIVISION IN MICHIGAN. Mr. Murray D. Van Wagoner, State Highway Commissioner of Michigan has established a Traffic and Safety Division in the Highway Department and has appointed D. GRANT MICKLE as director of this new division.

The Traffic and Safety Division will have equal status with other divisions such as the Construction and Maintenance Divisions.

ROCHESTER ANNUAL TRAFFIC SURVEY. This month the Institute received from the Rochester Engineering Society its 13th Annual Traffic Survey conducted by the Society's Traffic Committee. According to a report from Mr. LEON R. BROWN, member of the Institute and Chairman of the Traffic Committee, the survey was made with the assistance of the Boy Scouts of America, as has been the practice in former years.

The report includes studies of parking, bridge volume, pedestrian movements, and vehicle cordon counts. Speed tests were also made on certain important avenues.

If any members are interested in learning more about this unusual type survey which has been conducted in Rochester for the past 13 years, we suggest that they write to Mr. Brown.

DEPARTMENT OF TRAFFIC OF THE HIGHWAY RESEARCH BOARD. The Department of Traffic of the Highway Research Board headed by ARNOLD H. VEY, Traffic Engineer of the State of New Jersey, is at present undertaking nine traffic research projects. Seven of these nine subcommittees are headed by Institute members.

RAYMOND F. RIEGELMEIER. Mr. Raymond F. Riegelmeier has recently been appointed State Traffic Engineer of the State of Pennsylvania. He is now located with the Department of Highways at Harrisburg, Pennsylvania.

ANNUAL CONVENTION OF THE ILLUMINATING ENGINEERING SOCIETY. The Illuminating Engineering Society is holding its Annual Convention at the Hotel Fairmont, San Francisco, from August 21 to 25, 1939.

A cordial invitation has been extended to all Institute members to attend this convention. There is to be an entire session devoted to street and highway lighting on Wednesday morning, August 23.

ROBERT A. MITCHELL. According to Robert A. Mitchell, Traffic Engineer of Philadelphia, the Pedestrian Campaign reduced fatalities from 29 in May 1938, to 11 in May, 1939, the lowest monthly death record in 22 years.

NORTHWESTERN UNIVERSITY TRAFFIC INSTITUTE. Northwestern University Traffic Institute announces its course calendar for 1939-1940. They offer a Police Officer's Training Course being held from September 18, 1939 to June 1, 1940; Traffic Officers Short Course, from October 23 to November 11, 1939;an Executive Officers Short Course, from February 5 to 17, 1940; a Traffic Officers Short Course from March 4 to 23, 1940.

For detailed literature on all courses and for application forms for fellowships, write to Lieutenant F. M. Kreml, Director, Northwestern University Traffic Institute, 1827 Orrington Avenue, Evanston, Illinois.

INTERRELATIONSHIPS OF DRIVER TEST SCORES. Mr. EARL A. ALLGAIER is the most recent member of the Institute to fulfill our request for material that would be suitable for our Library. "Interrelationships of Driver Test Scores" is a 62 page bulletin containing the results of tests given to about 7,000 drivers.

Mr. Allgaier states that a few copies are still available for distribution and if any Institute members are interested he will try to handle their requests.

ANNUAL ITE CONVENTION--TENTATIVE PROGRAM. The Program Committee, under the guidance of DWIGHT M. McCRACKEN, Chairman, and GEORGE W. BARTON, Vice Chairman,is rapidly completing its plans for the 10th Annual Convention, October 14 to 17.

Judging from the plans to date this promises to be probably the best convention ever held by the Institute. Below is given a brief outline of the tentative program. Determine for yourself if this isn't an excellent program.

Saturday Afternoon--Meetings of standing committees.

Saturday Evening--Dinner meeting of Board of Direction

Sunday Afternoon--Business session and meeting of Board of Direction

Monday Morning--Biscuit Banter Breakfast

THE TRAFFIC ENGINEER TACKLES STATE HIGHWAY PROBLEMS--panel of three state traffic engineers covering the Survey, the Plan, and the Financing.

Monday Evening--Final meeting of Board of Direction

Tuesday Morning--TREATMENT OF PROBLEM LOCATIONS ON HIGHWAYS. "An information please" session led by five state traffic engineers.

Tuesday Afternoon--TREATMENT OF PROBLEM LOCATIONS ON CITY STREETS. To be led by five city traffic engineers.

Tuesday Evening--Annual Banquet and announcement of new officers.

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THE OBJECTIVES OF THE INSTITUTE

The objects of the Institute shall be the advancement of the art and science of traffic engineering, the fostering of traffic engineering education, the stimulation of original research in traffic engineering, the professional improvement of its members, the encouragement of intercourse between men with mutual interests in traffic engineering, and the establishment of a central point of reference and union for its members. (Article I, Section 4 of the Constitution of the INSTITUTE OF TRAFFIC ENGINEERING).

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